Division File

Weston Way
West Chester, PA 19380
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WSI
Weston Services, Inc.

0316000067 - Cook
Chicago / Paxton Ave
Superfund / Technical Proj

6 September 1990

Illinois Environmental Protection
Agency
Division of Air Pollution Control
Permit Section
1340 North Ninth St.
Springfield, IL 62702

W.O. #1104-05-01

Attention: Mr. Jim Cobb

Reference: Agency Contract No. BIE-9035
Paxton Avenue Lagoons Site
Chicago, Illinois - LPC #0316000067

Dear Jim:

The following data is a summary of select operational parameters for dates August 24,1990 thru August 31,1990 at the Paxton site.

Friday, August 24, 1990

Total Operational Hours:	8
Feed Screw Load:*	2.1 tons/hr minimum 2.4 tons/hr average 2.8 tons/hr maximum
Average Feed Rate:**	2.8 tons/hr
No Oxygen Enrichment:	Linde called, and expected on-site 8/25/90.
% Oxygen:*	13.2% minimum 20.9% maximum

Downtime due to CO spikes: 0 hours
Downtime: 16 hours total; 2 hours due to cross drag malfunction, 14 hours due to heat-up, draft, and high temperatures in the spray tower.

* Value shown on computer monitor
** Feed Rate = Actual feed (tons) ÷ operational time (hours)

Saturday, August 25, 1990

Total Operational Hours:	16.8	
Feed Screw Load:*	2.4	tons/hr minimum
	2.8	tons/hr average
	4.3	tons/hr maximum
Average Feed Rate:**	3.7	tons/hr

Oxygen Enrichment was utilized, however oxygen usage values were not recorded for this date. Linde was at the site and made adjustments to the oxygen system and flow meters.

% Oxygen:*	12.4% minimum
	17.2% maximum

Downtime due to CO spikes: 0 hours
Downtime: 6.7 hours total

Sunday, August 26, 1990

Total Operational Hours:	12.5	
Feed Screw Load:*	3.0	tons/hr minimum
	3.4	tons/hr average
	3.6	tons/hr maximum
Average Feed Rate:**	4.4	tons/hr

Primary Oxygen Enrichment:(avg scfh) 13.06k

SCC Oxygen Enrichment:(avg scfh) 16.92k

% Oxygen:*	11.4% minimum
	20.4% maximum

Downtime due to CO spikes: 0 hours
Downtime: 7.1 hours total; 2 hours due to product drag jams, 5.1 hours due to water contamination in CEM analyzers.

* Value shown on computer monitor
** Feed Rate = Actual feed (tons) ÷ operational time (hours)

Monday, August 27, 1990

Total Operational Hours:	12.7
Feed Screw Load:*	3.4 tons/hr minimum
	3.7 tons/hr average
	4.0 tons/hr maximum
Average Feed Rate:**	4.3 tons/hr
Primary Oxygen Enrichment:(avg scfh)	19.22k
SCC Oxygen Enrichment:(avg scfh)	12.26k
% Oxygen:*	13.1% minimum
	20.1% maximum

Downtime due to CO spikes: 0 hours
Downtime: 11.3 hrs total; 3.3 hrs due to cross drag malfunctions, 5.0 hrs due to fireye problems, and 3.0 hrs due to draft/slag problems.

Tuesday, August 28, 1990

Total Operational Hours:	4.9
Feed Screw Load:*	3.0 tons/hr minimum
	3.0 tons/hr average
	3.0 tons/hr maximum
Average Feed Rate:**	3.4 tons/hr
Primary Oxygen Enrichment:(avg scfh)	7.97k
SCC Oxygen Enrichment:(avg scfh)	14.25k
% Oxygen:*	14.1% minimum
	18.0% maximum

Downtime due to CO spikes: 0 hours
Downtime: 19.1 hrs total; 0 18 hours down due to weigh scale malfunction, however for 8 of the 18 hours "reburn" was fed.

* Value shown on computer monitor
** Feed Rate = Actual feed (tons) ÷ operational time (hours)

Wednesday August 29, 1990

Total Operational Hours:	10.7
Feed Screw Load:*	3.0 tons/hr minimum
	3.2 tons/hr average
	3.8 tons/hr maximum
Average Feed Rate:**	3.43 tons/hr
Primary Oxygen Enrichment:(avg scfh)	14.39k
SCC Oxygen Enrichment:(avg scfh)	12.32k
% Oxygen:*	14.1% minimum
	21.0% maximum

Downtime due to CO spikes: 0 hours
Downtime: 13.3 hrs total; 12 of these hours were due to burner problems

Thursday, August 30, 1990

Total Operational Hours:	8.8
Feed Screw Load:*	3.6 tons/hr minimum
	4.0 tons/hr average
	4.5 tons/hr maximum
Average Feed Rate:**	4.5 tons/hr
Primary Oxygen Enrichment:(avg scfh)	16.79k
SCC Oxygen Enrichment:(avg scfh)	13.48k
% Oxygen:*	13.6% minimum
	21.0% maximum

Downtime due to CO spikes: 6 minutes
Downtime: 5.2 hrs total; 5 hours due to fireye/burner problems

* Value shown on computer monitor
** Feed Rate = Actual feed (tons) ÷ operational time (hours)

Friday, August 31, 1990

Total Operational Hours:	18.7	
Feed Screw Load:*	2.9	tons/hr minimum
	3.2	tons/hr average
	4.7	tons/hr maximum
Average Feed Rate:**	2.1	tons/hr
Primary Oxygen Enrichment:(avg scfh)	12.74K	
SCC Oxygen Enrichment:(avg scfh)	11.74K	
% Oxygen:*	11.0%	minimum
	20.0%	maximum

Downtime due to CO spikes: 0 hours
Downtime: 5.3 hrs total; 5 hours due to fireye/burner problems

* Value shown on computer monitor
** Feed Rate = Actual feed (tons) ÷ operational time (hours)

In summary, the system was operated for a total of 93.10 hours between 24 August and 31 August 1990. Feed screw loads varied from 2.4 to 4.7 tons/hr. The average calculated feed rate (based on actual feed divided by operational time) varied from 2.1 to 4.5 tons/hr. Percent oxygen never dropped below 11.4%. Minor CO spikes were encountered with minimal downtime (17 minutes) due to the CO spikes. No downtime was caused as a result of the 60 minute CO rolling average exceeding the permit requirement. The CO spikes occur at various feed rates, and result when the feed material burning characteristics change. From Saturday, 25 August through Friday 31 August 1990 the Oxygen Enrichment System was employed to reduce the spikes and their downtime as soon as possible (under a minute; reference attachments). With the Oxygen Enrichment System operating, the limiting factor effecting feed rate was draft. We were able to maintain all operating permit conditions at a feed rate of 4.5 tons/hr.

Based on this operational data, WESTON respectfully requests the following modifications to the Permit:

Item 1a: Contaminated soil and sludge feed rate shall not exceed 9,000 lb/hr (4.5 tons/hr)

Item 1e: Change excess oxygen concentrations to greater than 13.5%

It would also be appropriate if a statement is added to the permit allowing for the continual use of the oxygen enrichment system and higher feed rates up to 9.3 tons/hr for other materials, including processed soil, provided WESTON maintains operations within the permit limits.

Very truly yours,

WESTON SERVICES, INC.

Colleen A Parker

Colleen A. Parker
Assistant Engineer

CAP:imn

Attachments

cc: Steve Gobelman
Jim Janssen
John Noland
Luis Velazquez

IEPA.906/CAP

USE L P S W C (1) WASTE STREAM NUMBER (AUTHORIZATION) (8–15) TRANS CODE (14) DATE ENTERED (15–20)

WASTE CHARACTERISTICS

Waste is: (check one) ___ Hazardous X Non-Hazardous as defined by U.S.E.P.A. in the Resource Conservation and Recovery Act, and regulations adopted thereunder, and the Illinois Pollution Control Board Title 35 - Subtitle G, Part 721.

USEPA Hazardous Waste Number(s) (21–24, 25–28, 29–32, 33–36, 37–40, 41–44, 45–48)

Total Annual Waste Volume (51–60): 80000 Volume Units (61): 2 Waste Phase (62): 3

Transport Frequency (63): 4 Waste Class (Agency Use) (64–65)

1 = ONE TIME, 2 = DAILY, 3 = WEEKLY, 4 = BI-WEEKLY, 5 = MONTHLY, 6 = BI-MONTHLY, 7 = QUARTERLY, 8 = SEMI-ANNUALLY

1 = CUBIC YARDS, 2 = GALLONS

1 = SOLID, 2 = SEMI-SOLID, 3 = LIQUID, 4 = GAS, 5 = POWDERS

	COMPONENT NAME	PERCENT		COMPONENT NAME	PERCENT
1 (21–22)	WATER (23–43)	46.2 (44–47)	2 (48)	OIL, GREASE (49–70)	23.1 (71–74)
3	Na, K, Ca, Mg SALTS	30.7	4		
5			6		

Flash Point (27–30): 212 °F Percent Acidity (36–40): . Percent Alkalinity (41–43): 2.1 pH (44–46): 11.3 Total Solids (47–51): 53.83%

Solid Waste: Fire Hazard ___ Corrosive ___ Reactive ___

		TOTAL (ppm)		REACTIVE (ppm)
Sulfide	13	8.7 (23–30)	Sulfide	6.0 (31–36)
Cyanide	01	0.2	Cyanide	0.0
Phenol	14	2.2		

METAL	KEY	EP TOXICITY (ppm)	METAL	KEY	EP TOXICITY (ppm)
	03	0.1 (31–38)	Hg	04 (39–40)	0.0 (49–56)
	05	0.0			
	07	1.0	Pb	08	0.1
	09	0.1	Se	10	0.0
	11	0.1			
RIN	15		LINDANE	16	
HOXYCHLOR	17		TOXAPHENE	18	
- D	19		2, 4, 5 - TP	20	

Laboratory Name (21–40): SUBURBAN LABS #1422

Verification Number (41–60): Reviewed by: (Agency Use) (61–63 / 64–68)